

**Update on the 2003 SCAQMD Plan**

**REGIONAL COUNCIL ATTACHMENT #4.3.1**

**Thursday, Feb. 6, 2003**

# MEMO

**TO:** Energy and Environment Committee (EEC) and Regional Council (RC)  
**FROM:** Molly Hoffman, Senior Regional Planner, Aviation and Environmental Planning, 213-236-1804, hoffman@scag.ca.gov  
**DATE:** February 6, 2003  
**SUBJECT:** 2003 South Coast Air Quality Management Plan (AQMP) and Emission Reduction Shortfall

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## Recommended Action:

Receive and File

## Summary:

Due to the use of the latest mobile source emissions inventory model (EMFAC2002), as required by the Federal Highway Administration (FHWA), the mobile source emissions inventory has substantially increased from previous air quality plans. As a result, there is a larger than expected gap between the forecasted emissions and the Basin's estimated carrying capacity. Depending on the air quality model selected, this gap could potentially equate to around a 160 ton per day "shortfall" in volatile organic compound (VOC) emission reductions. All real emission reductions have been identified and it will take a collaborative effort from all stakeholders to develop an innovative strategy to bring the South Coast Air Basin (Basin) in to attainment with the federal 1-hour ozone standard by 2010. SCAG's emission reduction contribution to the 2003 South Coast Air Quality Management Plan (AQMP) will be approximately 17 tons per day of VOCs. This is consistent with SCAG's commitment in the previous AQMP (97/99).

Due to this recently released information about substantial increases in the emissions inventory, the date of the final adoption of the 2003 AQMP has been delayed to the Summer of 2003, to allow for more time to develop additional control strategies.

## Background:

The South Coast Air Quality Management District (SCAQMD) recently released the "Preview of the Proposed 2003 Air Quality Management Plan" which describes the attainment picture for the Basin and identifies proposed control strategies and key policy issues for the 2003 AQMP <<http://www.aqmd.gov/aqmp/docs/Preview2003AQMP.pdf>>. The California Air Resources Board (CARB) has also released their Draft State and Federal Element of the South Coast State Implementation Plan (SIP), which includes a mobile source control strategy <[http://www.arb.ca.gov/sip/scsip03/scsip\\_03.htm](http://www.arb.ca.gov/sip/scsip03/scsip_03.htm)>.

The Basin is required to reach attainment with the federal particulate matter (with diameters of less than 10 microns) (PM10) standards by 2006 and the 1-hour ozone standard by 2010. While the air is getting cleaner, and the number of ozone exceedances have decreased substantially over the last two decades, significant emission reductions are still needed to bring the Basin into attainment. The greater Los Angeles area still experiences the worst overall air quality in the nation.

The Basin is expected to demonstrate attainment with the PM10 standards by 2006 with the implementation of additional stationary source controls. The Basin is also expected to meet the federal standards for carbon monoxide as long as there are no additional exceedances in 2002 (the Basin did not exceed the CO standards in 2001 and had only one violation in 2002). However, with respect to the federal standard for ozone, significant additional control strategies will need to be identified in order to reach attainment by 2010.

Due to the use of the latest mobile source emissions inventory model (EMFAC2002), as required by the Federal Highway Administration (FHWA), the mobile source emissions inventory has substantially increased from previous air quality plans. As a result, there is a larger than expected gap between the forecasted emissions and the Basin's estimated carrying capacity. This is mainly a concern for volatile organic compounds (VOCs) and nitrogen oxide (NOx) emissions. This larger gap means additional emission reductions than were originally anticipated are needed to reach attainment. Carrying capacity is the allowable amount of emissions the Basin can handle and still be in attainment with the federal standards. This increase in the estimated emissions inventory is mainly due to technical improvements in the air quality modeling.

Due to this recently released emissions inventory information, the date of the final adoption of the 2003 AQMP has been delayed to the Summer of 2003 to allow for more time to develop control strategies. The Draft 2003 AQMP is expected to be released to the public in early February 2003.

There are only a few years remaining to actualize the emissions reductions required for attainment. Failure to implement an adequate SIP could result in federal sanctions such as a ban on approval of new highway projects and a loss of highway funding, as well as more stringent emission offsets for stationary sources.

Depending on the choice of models used to determine carrying capacity, the emissions reduction shortfall for VOCs could reach up to 160 tons per day. Actualizing the required emissions reductions to reach attainment will require teamwork from all four agencies involved - SCAQMD, CARB, United States Environmental Protection Agency (USEPA) and SCAG. The majority of ozone precursor emissions (VOCs and NOx) are generated from sources under state and federal jurisdiction. In 2010 mobile sources are expected to contribute 71% of the total ozone forming pollution, compared to 29% from stationary sources (with implementation of adopted rules and regulations). CARB and EPA have jurisdiction over mobile sources and SCAQMD has jurisdiction over stationary sources.

SCAG is responsible for the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP), which ultimately impact air quality.

Both SCAQMD and CARB state they have identified all possible emissions reductions that can be implemented at this time, based on current and known technologies. CARB staff continues to pursue long-term measures, and beginning in 2004, will solicit written proposals for innovative control concepts. USEPA is evaluating their options for emissions reductions. However, they have noted that their contribution to emission reductions in the current plan cycle will be limited, due to lack of resources and time. In addition, USEPA has also noted that they can not promulgate rules only for Southern California.

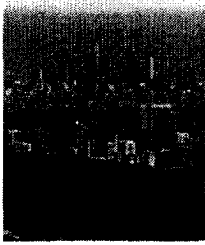
SCAG will adhere to its 17 ton per day VOC emissions reduction commitment contained in the 1997/99 AQMP. SCAG is currently finalizing an analytic comparison of the air quality impacts of changes in socio-economic profiles and growth forecasts between the 1998 RTP and 2001 RTP. Potential emission reductions due to changes in the socio-economic profile of the region takes account of changes in land use patterns. For example, changes in jobs-housing balance induced by urban form and transit-oriented development, induce changes in VMT by closely linking housing to jobs. In addition, changes in growth forecasts alone, due to the implementation of land use measures between the 1998 RTP and the 2001 RTP (such as densification of development around transit centers) resulted in approximately an 8 to 10 ton per day decrease in VOCs from the reductions in growth-related VMT forecasts. SCAG's Transportation Control Measure (TCM) strategy will also provide emission reductions. Therefore, the combination of land use strategies, socio-economic profiles and TCMs, all contained in the 2001 RTP, are expected to demonstrate an overall reduction of approximately 17 tons per day of VOC emissions by the year 2010.

Under Section 182(e)(5) of the federal Clean Air Act, extreme ozone areas are allowed to allocate emission reductions to anticipated future technologies, or what is commonly referred to as the "black box" measures. However, reliance on the "black box" measures will need to be actualized as real, quantifiable emission reductions before 2010.



# Air Quality Update:

2003 South Coast Air Quality Management Plan  
and the Emission Reduction Shortfall



Presented to EEC and RC on February 6, 2003  
Molly Hoffman, Senior Regional Planner  
Southern California Association of Governments

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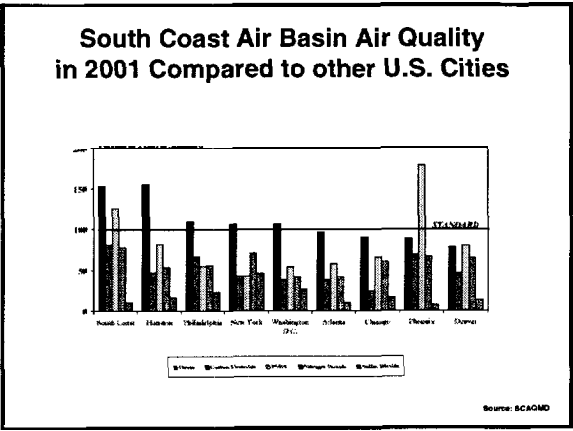
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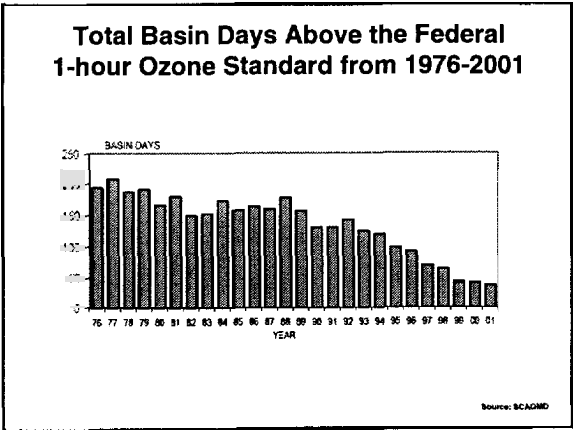
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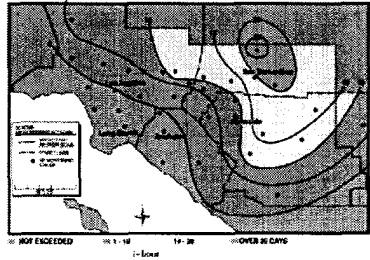
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### Number of Days Exceeding the Federal 1-Hour Ozone Standard in 2001



Source: SCAQMD

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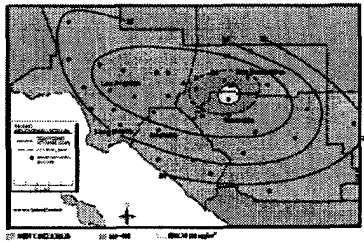
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### Annual Average PM10 Concentration in 2001



Source: SCAQMD

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### Attainment Dates

- PM10 2006
- Ozone (1hr) 2010
- PM2.5 2014 (estimated)
- Ozone (8hr) 2021 (estimated)




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## Key Policy Issues for 2003 AQMP

- ❑ Episodes for Attainment Demonstration
  - ✦ August 5, 1997 (less extreme than '98 episode)
- ❑ Ozone Modeling/Chemistry Module
- ❑ Reliance on "Black Box" Measures
- ❑ Shared Responsibility for Reducing Emissions

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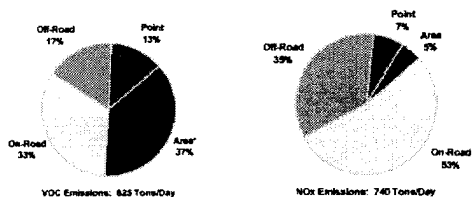
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## Relative Contribution by Source Category to 2010 Emission Inventory for Ozone



Consumer Products, under CARB's jurisdiction represents 48% (i.e. 108 tpd) of the total area source VOC emissions inventory

Source: SCAQMD

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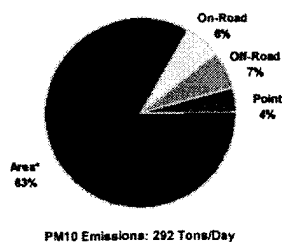
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## Relative Contribution by Source Category to 2006 Emissions Inventory for PM10



\*71% of area source emissions (i.e., 207 tons/day of PM10) is associated with fugitive dust sources

Source: SCAQMD

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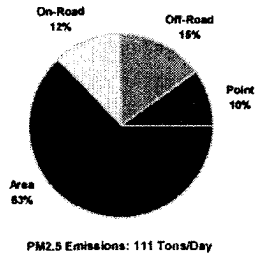
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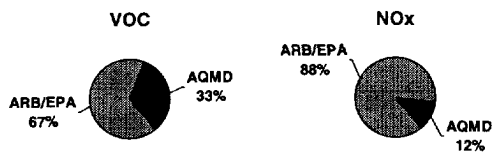
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### Relative Contribution by Source Category to 2006 Emission Inventory for PM2.5



Source: SCAQMD

### VOC/NOx Contribution by Agency (2010)



Source: SCAQMD

### Control Strategy

- CARB and USEPA
  - ♦ 19 Mobile Source Control Measures
  - ♦ 8 Non-Mobile Source Control Measures
  - ♦ VOC: ~ 118 TPD
- SCAQMD
  - ♦ 20 Stationary Source Control Measures
  - ♦ VOC: ~ 32 TPD
- SCAG
  - ♦ TCMs (& land use)
  - ♦ VOC: ~ 17 TPD



## 2003 AQMP Schedule

- Draft AQMP- February 2003
- Public Workshops- February 2003
- Public Hearing/Adoption- Summer 2003

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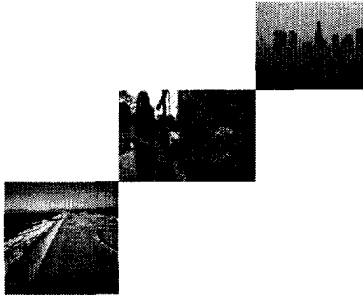
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